17 Nov 85

THE WASHINGTON POST

Profile of a Polygraph

How It Works, and What It Doesn't Do

By Morton Mintz
Washington Post Staff Writer

Each year, hundreds of thousands of job-seekers take a polygraph test. The prospective employer's assumption and rationale are that it—or any screening technique—will enable the company to predict illegal conduct more accurately than by relying on chance.

A polygraph measures certain "arousal" reactions. Advocates contend that, under questioning by the machine operator, lying or deceptiveness induces fear, the fear creates stress and the stress reveals itself in measurable changes in cardiovascular activity (blood pressure, heart rate, pulse), the rate and depth of breathing, and sweating.

Under this theory, the polygraph is not a "lie detector," because what it measures is the fear of detection, not lying or deceptiveness itself.

Similarly, J. Kirk Barefoot, past president of the American Polygraph Association, said: "The instrument makes no decisions and is nothing more than a diagnostic tool. No bells ring, no lights light, and there is nothing that can be compared to a computer which gives a definitive answer based on the input which is fed into it."

The examiner attaches three devices to a person taking a test (the "examinee," in the jargon): an arm cuff similar to the "cardio cuff" used to measure blood pressure, one tube around the chest and another around the abdomen, and electrodes on two fingertips. The cuff drives one pen, the tubes two more, and the electrodes a fourth. Each pen produces a line on a chart.

Normally, the operator conducts an initial interview to try to generate a psychological atmosphere in which the examinee will accept the accuracy of the test he is about to take and accept also that all of the questions to be put are of equal importance. These include "irrelevant" questions involving usually innocuous matters (such as the person's nickname) and "relevant" questions (such as, Have you ever been fired?). The responses to irrelevant questions yield baselines to be contrasted with the lines resulting from responses to sensitive questions.

Commonly, pre-employment screening tests last 15 minutes to an hour, compared with three, four, or more hours for national-security-related and criminal-investigation examinations. During the examination, the operator reviews with the person answers suggesting possible deception.

Finally, after a post-test interview, the examiner assesses all of the results. He is the one who "must make a decision as to truthfulness or falsehood," Lightfoot told a House Education and Labor subcommittee last summer. In screening job applicants, "The examiner should be thought of as a personnel or interviewing specialist, who simply uses a polygraph to assist him in making decisions," he said.

Often, an examiner is paid $25 to $50—a fee well below the cost of time-consuming reviews of resumes, checks of references and the like.

The Office of Technology Assessment concluded in a 1983 report "that there is at present only limited scientific evidence for establishing the validity of polygraph testing." OTA said its "review of 24 relevant studies meeting minimal acceptable scientific criteria found that, for example, correct guilty detections ranged from about 35 to 100 percent.

"Overall, the cumulative research evidence suggests that, when used in criminal investigations, the polygraph test detects deception better than chance, but with error rates that could be considered significant," OTA said.

OTA also found "that the mathematical chance of incorrect identification of innocent persons as deceptive (false positives) is highest when the polygraph is used for screening purposes."

The report said that "the examinee's intelligence level, state of psychological health, emotional stability and belief in the 'machine' are among the other factors that may, at least theoretically, affect physiological responses."

Supporters of using the results of polygraph tests argue that the results are reliable and that the tests provide a cost-effective method of screening out undesirable employes.

"Hundreds of thousands of companies . . . depend on polygraph screening to maintain acceptable profit margins," Barefoot said. "If [it] were to be denied to these companies, many of them eventually would be forced out of business due to higher theft rates by employes. Those which would not be forced out of business would simply have to raise the prices of their products . . .

Douglas G. Williams, a former Oklahoma City detective sergeant and author of a widely circulated underground manual on how to beat the machine, told House hearings on whether to bar the results of polygraph tests that it is possible to defeat the machine.

"I can tell the complete truth, or a complete lie, or anything in between, and still pass any lie detector test given any time, by anyone anywhere," Williams testified.

The OTA report cited "limited" evidence that deceptive persons who use physical countermeasures, including meprobamate, a particular tranquilizer, and hypnosis, "and who can distinguish nonrelevant from relevant questions . . . can increase their chances of avoiding detection."

"Employers routinely circumvent federal law simply by asking employes to take a lie detector test," Williams charged. Although many areas such as past arrests and sexual habits are off-limits to employers in pre-employment tests, an employer "can disregard the law by paying a 'hired gun' to ask questions he is legally prohibited from asking . . . " he said.

Sharply contrasting appraisals come from Barefoot and Lawrence W. Talley, Days Inns' vice president for risk management.

"All of the scientific surveys of people who have actually taken polygraph tests show that the great majority do not find the test to be offensive, objectionable, or an invasion of privacy," Professor Frank Horvath, director of the American Polygraph Association Research Center at Michigan State University, wrote in USA Today.

Most polygraphers "have had little scientific or clinical psychological training," said psychologist Benjamin Kleinmuntz of the University of Illinois. "The typical background is a high school education and a six-week-to-six-month course in polygraphic examination and psychology—depending on state certification requirements, if any."

Even under the best of circumstances, when an examiner advises a person not be hired, he doesn't know whether the applicant would have made a bad or good employe, according to opponents of the tests. Nor does he know whether his inferences from the person's past foretell his or her future. And, commonly, the applicant neither sees the results of the exam or of the examiner's assessment nor knows just who may see the results.